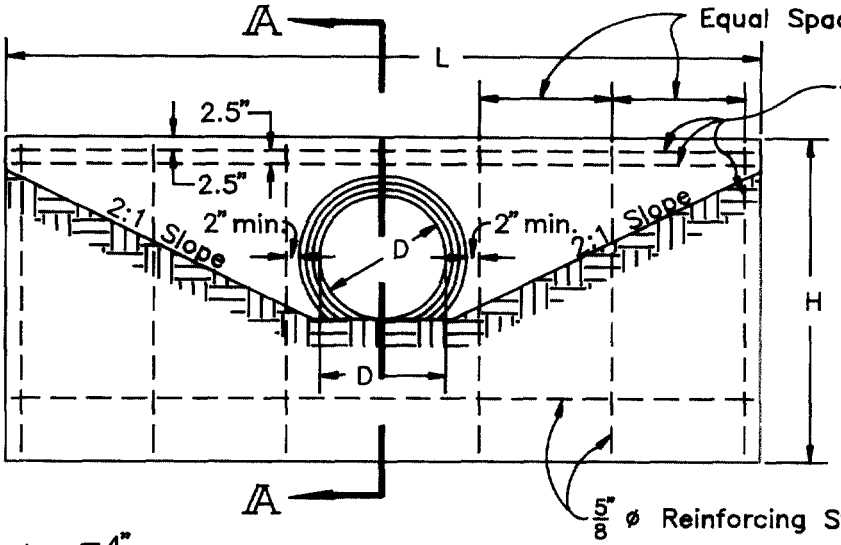
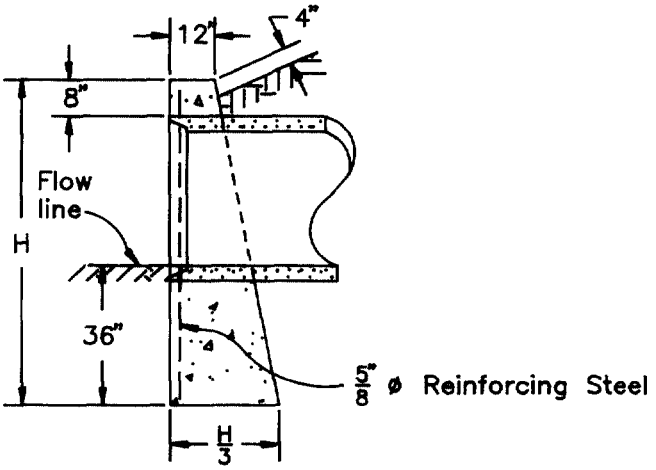
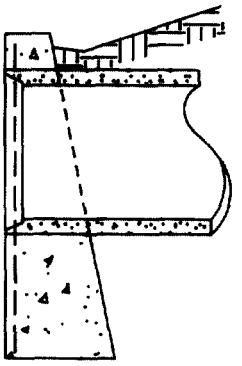
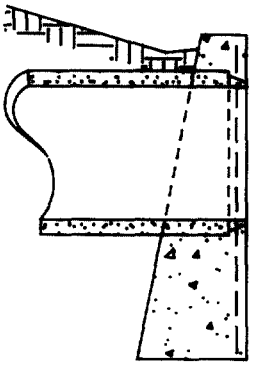




SECTION A–A



INLET END
GROOVE OR BELL
UPSTREAM



OUTLET END
TONGUE OR SPIGOT
DOWNSTREAM

END TREATMENT AT HEADWALL

NOTES:

Headwall where required will be provided for nonskewed culverts having a diameter or rise of 36" or less.
Reinforcing Steel Bars shall be 5/8 inch round.
Dimensions and quantities are shown for circular sections only. It will be necessary to determine dimensions for the headwall required for reinforced elliptical concrete pipe or corrugated metal pipe arches in accordance with the equations listed on this drawing.
Concrete shall be Class "C".
Foundation: Where the soil borings indicate a bearing capacity of less than 2600 pounds per square foot it will be necessary to increase the width of the base.
If slopes other than 2:1 are used, the Length "L" , and Height "H" will require adjustments.

DIMENSIONS			QUANTITIES *	
Diameter	H	L	Concrete cu. yds.	Reinforcing Steel lbs.
8"~12"	4'–9"	5'–8"	1.3	32
15"	5'–2"	7'–0"	1.7	41
18"	5'–5"	8'–4"	2.2	57
21"	5'–8"	9'–8"	2.8	62
24"	5'–11"	11'–0"	3.3	69
30"	6'–5"	13'–8"	4.7	92
36"	7'–0"	16'–4"	6.5	105

L Circular Sections = 5D+4t
L Elliptical or Pipe–Arch = 4R+t+S
H Circular Sections = D+t+44"
H Elliptical or Pipe–Arch = R+t+44"

D = Diameter of Pipe
R = Rise of Pipe
S = Span of Pipe
t = Thickness of Barrel
L = Length of Headwall
H = Height of Headwall

* ONE WALL

STORMWATER PROGRAM MANAGER

ADMINISTRATOR

12/15/93
APPROVED

REVISED

CAST IN PLACE PIPE CULVERT HEADWALLS 8" to 36" DIA.

CITY OF COLUMBUS
DEPARTMENT OF
PUBLIC UTILITIES
DIVISION OF SEWERAGE & DRAINAGE

STANDARD
CONSTRUCTION DRAWING

DR. W.C.K.
CK.

SHEET 1 OF 1

FILE NO. AA–S166